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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/607,029	06/27/2003	Chang Wook Han	049128-5111	5609

9629 7590 11/17/2004

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EXAMINER

QUINTO, KEVIN V

ART UNIT PAPER NUMBER

2826

DATE MAILED: 11/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/607,029

Applicant(s)

HAN, CHANG WOOK

Examiner

Kevin Quinto

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 June 2003.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-4, 10 and 15-18 is/are rejected.
7) ☒ Claim(s) 5-9, 11-14 and 19-28 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 2, 3, 15, 17, and 18 are rejected under 35 U.S.C. 102(e) as being anticipated by Mochizuki et al. (United States Patent Application Publication No. US 2002/0105267 A1).
4. In reference to claims 1 and 15, Mochizuki et al. (United States Patent Application Publication No. US 2002/0105267 A1, hereinafter referred to as the "Mochizuki" reference) discloses a similar device and its method of fabrication. The examiner would like to note that the use of the word "on" by itself does not necessarily mean direct contact between two objects or layers in the semiconductor art. The word "on" by itself could mean that there may possibly

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be one or several layers between the two objects or layers to which the word "on" is referring. Figure 13 of Mochizuki discloses an active matrix organic electro luminescence display panel device with a substrate (249) and a thin film transistor (246). A low refractive thin film (244) is formed on the substrate (249). There is an electro luminescence diode (241) on the low refractive thin film (244). Mochizuki makes it clear that the EL element or diode (241) within the specification may be organic (p.3, paragraph 50).

5. With regard to claims 2, 3, 17, and 18, Mochizuki discloses the use of silica aerogel (p. 4, paragraph 76) as the low refractive thin film (244). The refractive rate of the silica aerogel is 1.08 (p. 5, paragraph 77).

6. Claims 1-4, 10, and 15-18 are rejected under 35 U.S.C. 102(e) as being anticipated by Miyazawa (United States Patent Application Publication No. US 2003/0127974 A1).

7. In reference to claims 1 and 15, Miyazawa (United States Patent Application Publication No. US 2003/0127974 A1) discloses a similar device and its method of fabrication. The examiner would like to note that the use of the word "on" by itself does not necessarily mean direct contact between two objects or layers in the semiconductor art. The word "on" by itself could mean that there may possibly be one or several layers between the two objects or layers to which the word "on" is referring. Figures 15, 16, and 17 of Miyazawa each disclose an active matrix organic electro luminescence display panel device (S5 – figure 15, S6 – figure 16, S7 –figure 17) with a substrate (2 – figure 15, 2 or 53 – figures 16 and 17). A low refractive thin film (3) is formed on the substrate (2 – figure 15, 2

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or 53 – figures 16 and 17). There is an organic electro luminescence diode (23, 60, 222) on the low refractive thin film (3).

8. With regard to claims 2, 3, 17, and 18, Miyazawa discloses the use of silica aerogel (p. 4, paragraph 63) as the low refractive thin film (3). The refractive rate of the silica aerogel is 1.2 or less (p. 4, paragraph 63).

9. In reference to claims 4 and 16, Miyazawa has a switching device (24 – figure 15, not labeled in figures 16 and 17) which is formed on the low refractive thin film (3). Although not shown in the cross-section views of figures 15, 16, and 17, figures 7 and 8 of Miyazawa makes it clear that there is a capacitor (labeled “cap”) for sustaining light emission of the organic electro luminescence diode.

10. In reference to claim 10, figure 17 of Miyazawa shows that there is a switching device formed between the substrate (2 or 53) and the low refractive thin film (3). Although not shown in the cross-section view of figure 17, figures 7 and 8 of Miyazawa makes it clear that there is a capacitor (labeled “cap”) for sustaining light emission of the organic electro luminescence diode.

Allowable Subject Matter

11. Claims 5-9, 11-14, and 19-28 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

12. The following is a statement of reasons for the indication of allowable subject matter: the examiner is unaware of any prior art which suggests an active matrix organic electro luminescence display panel device which utilizes a

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low refractive thin film and a buffer layer formed on a substrate such that a semiconductor layer is formed on the buffer layer (in order to form a transistor) and an organic electro luminescence diode is formed on the low refractive thin film.


NATHAN J. FLYNN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Quinto whose telephone number is (571) 272-1920. The examiner can normally be reached on M-F 8AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan Flynn can be reached on (571) 272-1915. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KVQ